THE JOURNAL OF GENERAL MICROBIOLOGY

1508

EDITED FOR THE SOCIETY FOR GENERAL MICROBIOLOGY

Editors

B. A. FRY S. W. GLOVER B. C. J. G. KNIGHT J. R. POSTGATE A. F. B. STANDFAST

Editorial Board

B. A. BRIDGES
R. J. W. BYRDE
J. F. COLLINS
J. W.
S. T. COWAN
M. F.
N. DATTA
P. MI
T. H. FLEWETT
J. R. GUEST
I. MC
N. G. HEATLEY
L. R. HILL
P. N. HOBSON
C. R.

A. J. HOLDING
S. P. LAPAGE
J. W. LIGHTBOWN
M. F. MADELIN
P. MEADOW
E. O. MORRIS
I. MORRIS
G. J. F. PUGH
M. H. RICHMOND
C. ROBERTS
N. F. ROBERTSON

J. A. ROPER
A. H. ROSE
J. G. SCAIFE
J. M. SHEWAN
D. A. SMITH
D. W. TEMPEST
K. VICKERMAN
R. WHITTENBURY
J. F. WILKINSON
K. S. ZINNEMANN

VOLUME 59, 1969

CAMBRIDGE AT THE UNIVERSITY PRESS 1969

PUBLISHED BY THE CAMBRIDGE UNIVERSITY PRESS Bentley House, 200 Euston Road, London, N.W. I American Branch: 32 East 57th Street, New York, N.Y. 10022

Part 1 issued November 1969

	DACE
Pathways for the Oxidation of Aromatic Compounds by Azotobacter. By C. HARDISSON, J. M. SALA-TREPAT and R. Y. STANIER	PAGE
Influence of Oxygen on Maltose Metabolism by Mucor rouxii. By A. Flores-Carreón, E. Reyes and J. Ruíz-Herrera	13
Deoxyribonucleic Acid Homology in Yeasts. Genetic Relatedness within the Genus Candida. By A. Leth Bak and A. Stenderup	21
Sporulation of Aspergillus niger in Submerged Liquid Culture. By J. C. GAL-BRAITH and J. E. SMITH	31
The Acylamide Amidohydrolase of Candida utilis: Purification and Properties. By B. L. Brady	47
Tumour-initiating Ability and Nutrition in the Genus Agrobacterium. By J. A. LIPPINCOTT and B. B. LIPPINCOTT	57
Genetic Mapping of the <i>phoR</i> Regulator Gene of Alkaline Phosphatase in <i>Escherichia coli</i> . By M. Bracha and E. Yagil	77
Steady State Operation of a Continuous Culture at Maximum Growth Rate by Control of Carbon Dioxide Production. By T. G. WATSON	83
The Lysis of Cholera and El Tor Vibrios. By P. C. Adhikari, C. Raychaudhuri and S. N. Chatterjee	91
Pyruvate Carboxylase in <i>Rhodopseudomonas spheroides</i> . By J. PAYNE and J. G. Morris	97
Cell-wall Proteins of Aspergillus niger and Chaetomium globosum. By A. D. MITCHELL and I. E. P. TAYLOR	103
End-product Control of Acetohydroxyacid Synthetase by Valine in <i>Penicillium chrysogenum</i> Q176 and a High Penicillin-yielding Mutant. By S. A. GOULDEN and F. W. CHATTAWAY	III
Aflatoxin Production by Some Indian Strains of Aspergillus flavus Link ex Fries. By K. K. Maggon, L. Viswanathan, T. A. Venkitasubramanian and K. G. Mukerji	119
Production of a Milk-clotting Enzyme Preparation by Aspergillus niger and the Effect of Various Factors on its Activity. By H. G. OSMAN, A. F. ABDEL-	
FATTAH, M. ABDEL-SAMIE and S. S. MABROUK	125

	PAGE
Purification and Some Properties of Milk-clotting Enzyme from Aspergillus niger. By H. G. Osman, A. F. Abdel-Fattah and S. S. Mabrouk	131
Aspergillus fumigatus and Sporormia minima Isolated from the Rumen of Sheep. By D. Brewer and A. Taylor	137
Mycobacterium sp. strain 80: Mycobacterium phlei or Mycobacterium smegmatis? By S. M. Gelbart and S. E. Juhasz.	141
Part 2 issued December 1969	
Studies on Lipids of Soil Micro-organisms with Particular Reference to Hydro-	
carbons. By J. G. Jones	145
Physiological Ecology of Leucothrix mucor. By M. T. KELLY and T. D. BROCK	153
Energetics of Growth of Azotobacter vinelandii in a Glucose-limited Chemostat Culture. By S. NAGAI, Y. NISHIZAWA and S. AIBA	163
The Stability and Cell Content of Penicillinase Messenger RNA in Bacillus licheniformis. By J. W. DAVIES	171
The Effects of Ultra-violet Irradiation on the Fertility of F ⁺ and Hfr Strains of Escherichia coli K 12 Defective for the Repair of Damaged DNA. By K. A. STACEY, Z. EVENCHIK and W. HAYES	185
Serological Specificity of Yeast Mannan. By I. CAMPBELL and R. H. GILMOUR	193
The Action of Streptomycins on the Chloroplast System of Euglena gracilis. By L. Ebringer, J. L. Mego, A. Jurášek and R. Kada	203
The Regulation of Some Enzymes Involved in Ammonia Assimilation by Rhizo-bium japonicum. By P. F. FOTTRELL and P. MOONEY	211
The Fatty Acid Composition of Sporangiospores and Vegetative Mycelium of Temperature-adapted Fungi in the Order Mucorales. By J. L. Sumner and	
E. D. Morgan	215
The Binding of Crystal Violet by Isolated Cell-wall Material. By G. WISTREICH and J. W. BARTHOLOMEW	223
Potassium Transport in Non-growing Mycelium of Neocosmospora vasinfecta. By K. Budd	229
Lysosomal Activity and its Control in Encysting Hartmannella castellanii. By A. J. Griffiths and S. M. Bowen	239
Transformation of <i>Micrococcus lysodeikticus</i> by Various Members of the Family Micrococcaceae. By W. E. KLOOS	247
Cytochemical Observations on the Localization of Sulphydryl Groups in Budding Yeast Cells and in the Phialides of <i>Penicillium notatum</i> Westling during Conidiation. By D. PITT	257
Role of Divalent Cations in the Action of Polymyxin B and EDTA on Pseudo- monas aeruginosa. By M. R. W. Brown and J. Melling	263

	PAG
An Analysis of the Distribution of Volumes amongst Spores of the Cellular Slime Mould Dictyostelium discoideum. By M. J. SACKIN and J. M. ASHWORTH	27:
Inducible Sucrase Activity in Bacillus subtilis Distinct from Levan-sucrase. By L. S. Prestidge and J. Spizizen	285
Part 3 issued December 1969	
The Genetics of Penicillinase Production in Staphylococcus aureus Strain PS 80. By E. H. Asheshov	289
Heritable Mass Conversion of a Mutant Penicillinase-negative Culture of Bacillus cereus to a Positive Fully De-repressed State. By M. R. POLLOCK and J. FLEMING	201
The Effect of Long Chain Fatty Acid Isomers on Growth, Fatty Acid Composition and Osmotic Fragility of Mycoplasma laidlawii A. By S. ROTTEM and	303
C. Panos	317
Enhancement of Damage to <i>Escherichia coli</i> Strain B/R after Ultraviolet and γ Irradiation. By A. J. Forage and N. E. Gillies	329
Incorporation of Thymine into Prototrophic and Thymine-dependent Mutants of <i>Bacillus anthracis</i> . By G. Ivánovics, A. Dobozy and L. Pál	337
The Respiratory Metabolism of Acanthamoeba rhysodes During Encystation. By R. N. BAND and S. MOHRLOK	35
Genetic Evidence for Hybridization in an Interspecific Cross in the Genus Sordaria. By L. A. Lewis.	359
An Albino Mutant of <i>Blastocladiella emersonii</i> : Comparative Studies of Zoospore Behaviour and Fine Structure. By D. S. SHAW and E. C. CANTINO	369
The Immunodepressive Effect of a Murine Plasmodium and its Interaction with Murine Oncogenic Viruses. By M. H. SALAMAN, N. WEDDERBURN and L. J. BRUCE-CHWATT	383
Isolation and Characterization of Substance in Yeast Extract which Inhibits Growth of Thymine-less Strains of <i>Escherichia coli</i> . By N. KINOSHITA, H. AKIYOSHI and H. ENDO	393
Host-independent Growth of <i>Bdellovibrio bacteriovorus</i> in Microbial Extracts. By A. M. REINER and M. SHILO	401
The Somatic Antigens of Two Strains of Rhizobium trifolii. By B. HUMPHREY and J. M. VINCENT	411
A Simple Device for Obtaining Axenic Cultures of Phototactic Unicells. By K. J. Adams	427

Selection of Mutant Bacterial Sex Factors G. G. MEYNELL and E. AUFREITER .		129
Books Received		131
Proceedings of the Birmingham Meeting of 1969	of the Society on 18–20 September	i



